

REMARKS

Claims 1, 3, 7-9, 11 and 16-18 have been rejected under 35 U.S.C. 102(b) as being anticipated by Diesch (U.S. Patent 5,094,224). Claims 2, 4, 10, 12, 15 and 22 have been rejected under 35 U.S.C. 103(a) as being obvious over Diesch in view of O'Donnell et al (U.S. Patent Application Publication US2002/0005275 A1). Claims 5, 6, 13, 14 and 19-21 have been rejected under 35 U.S.C. 103(a) as being obvious over Diesch in view of O'Donnell et al and further in view of Naji (U.S. Patent 6,289,982).

Claims 2, 10 and 22 have cancelled. Claims 1, 3, 5-9, 11, 13-18 and 21 have been amended as set forth hereinabove. Claims 23-25 have been added. It is believed that the remaining claims, namely claims 1, 3-9, 11-21 and 23-25, are in condition for allowance for the reasons set forth hereinbelow.

1. The Rejection Under 35 U.S.C. 102(b)

Diesch teaches a heat exchanger tube having generally elliptical indentations 40 formed alternately on opposite sides of a flattened portion 34 of the tube. See column 5, lines 5-15. As can be best seen in Figures 1 and 3 of Diesch, the indentations do not appear to project into the tube beyond the centerline thereof and no portions of opposing pairs of indentations are aligned transversely.

Independent claims 1, 9 and 17 recite that opposed dimples are offset from each other along the length of the tube such that only a portion of each dimple is transversely aligned with the other dimple. Diesch does not show this feature of applicants' invention. Further, claim 7, which depends on claim 1, recites that the dimples project into the tube a distance greater than one-half of the minor dimension of the tube so that portions of the opposed dimples are in contact with each other. Diesch does not teach this feature.

In view of the foregoing, it is believed that the rejection of claims 1, 3, 7-9, 11 and 16-18 under 35 U.S.C. 102(b) should be withdrawn.

2. The Rejections Under 35 U.S.C. 103(a)

To establish a *prima facie* case of obviousness under 35 U.S. C. 103(a), there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify a reference or combine reference teachings. *M.P.E.P.*

§2143. The Office Action states that to form the dimples so that they touch each other would be obvious in view of O'Donnell et al and that location, shape and size of the dimples would be obvious in view of Naji.

O'Donnell et al teaches a heat exchanger tube with indentations 15 arranged in opposing pairs. The indentations of each pair are directly opposite one another and are not offset along the length of the tube. See paragraph 0009 on page 1 of O'Donnell et al. There is no teaching or suggestion in O'Donnell et al of the desirability of modifying a heat exchanger tube of the type taught by Diesch so that the opposing dimples touch each other. In fact, O'Donnell et al teaches the undesirability of heat exchanger tubes with flattened sections of the type taught by Diesch. See paragraph 0004 on page 1 of O'Donnell et al. Therefore, one skilled in the art would not be motivated to consult O'Donnell et al to modify Diesch's tube. Naji teaches a heat exchanger plate 13 with a random pattern of dimples 9 punched therein. Naji does not show or suggest a heat exchanger tube with opposing pairs of dimples, so that one skilled in the art would not be motivated to consult Naji to modify Diesch's tube.

Claims 4-6, 12-15 and 19-21 recite that the opposed dimples are offset from each other along the length of the tube such that only a portion of each dimple is transversely aligned with the other dimple. Claims 6, 14 and 21 also recite that the dimples are offset by not more than one-half of the length of each dimple along the tube. Claims 5, 7, 13, 15, 19 and 20 also recite that at least one dimple projects into the tube by more than one-half of the tube's minor dimension (e.g., diameter). The cited references, taken singly or in combination, do not show or suggest any of these claimed features.

Figure 3 of Diesch indicates that no portions of opposing dimples are transversely aligned and that the dimples 40 do not project into the tube by more than one-half of the minor dimension (e.g., diameter) of the tube. There is no suggestion in any of the references to modify Diesch's tube so that opposing dimples are in partial transverse alignment or so that any of the dimples projects into the tube by more than one-half of the minor dimension thereof.

In view of the foregoing, it is believed that the rejection of claims 4-6, 12-15 and 19-21 under 35 U.S. C. §103(a) should be withdrawn.

3. Conclusion

In view of the foregoing, it is believed that claims 1, 3-9, 11-21 and 23-25 are in condition for allowance and it is respectfully requested that the case be advanced to issue. No additional fee is believed to be due.

Respectfully submitted,

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